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ABSTRACT

Test-study spelling instruction (diagnostic-prescriptive) involves a pretest on words, practice with misspelled words, and a posttest. Study-test spelling (nondiagnostic-prescriptive) involves the study of all words, known or not known, followed by a test. A review of the literature reveals overwhelming support for the test-study method, but it is almost impossible to find a test-study basal program in use today. A study was conducted among 25 second-grade classrooms, in which the teachers, using a study-test text, agreed to pretest their students on Monday rather than on Wednesday (as recommended in the text) and again on Friday. All other aspects of the weekly schedule were followed. Analysis of the pretests and posttests showed that students learned only 2.9 words per week and almost half of the students scored 80% or higher on the pretest. One-half of the students had little need for instruction and learned fewer than three words during 75 minutes of instruction per week. The study indicates that study-test spelling instruction prevents teachers from knowing whether instruction is needed and from determining the number of words that are learned each week. Study-test instruction also forces students to spend time studying words already known. (HOD)

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Spelling Instruction is Diagnostic-Prescriptive Minus the Diagnostic

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Introduction

Most of us believe in a diagnostic-prescriptive approach to teaching. Walter Petty (1969) wrote that "...finding out what a learner already knows before teaching is a teaching principle that is many years old--in all subject areas..." (pp. 86-87).

Those involved in the teaching of spelling refer to the diagnostic-prescriptive approach as the "test-study" method. An example of test-study spelling is when students take a unit pretest over the words on Monday, study only those words misspelled during the week, and take a final test on Friday to determine growth.

Non-diagnostic spelling--the "study-test" method--is when students begin the weekly unit by studying all of the words, Monday through Thursday, and take a final test on Friday. Some programs recommend a practice test that is usually taken on Wednesday or Thursday, but there are no provisions to pretest before instruction or to measure growth between Monday and Friday.

The overwhelming majority of spelling programs are non-diagnostic or study-test in nature. While publishers of

spelling programs claim that their programs are diagnostic, making reference to individualized, criterion-referenced testing procedures, a closer examination will reveal that a more appropriate label for such programs is "study-test" which is not diagnostic-prescriptive at all.

An evaluation of three nationally prominent programs further illustrates the point. Basic Goals in Spelling (Kottmeyer & Claus, 1976), the most widely used spelling program in the Houston area, provides for a "check-point" test to be given on Wednesday, after two days of instruction. The check-point test is the first time in the week that students are tested on the words. The Harbrace Spelling Program (Madden & Carlson, 1974), and the Spell Correctly program (Benthul, et al, 1974) follow the identical procedure recommending that testing be delayed until after two or three days of instruction.

The three programs identified here exemplify those used in the majority of classrooms today and are study-test or non-diagnostic, regardless of publishers' claims.

The purpose of this article is to review the research associated with the study-test and test-study methods in spelling and to describe a study which illustrates the negative effects of a study-test program on students and their teachers.

Review of the Literature

An in-depth search to find support for study-test is difficult. Gates (1931) felt that study-test might be used in grade two, even though his study involved grades five through eight. Richmond (1956) reported that study-test was effective for sixth grade retarded and slow-learning students. Christine and Hollingsworth (1966) suggested that study-test could be as effective as test-study but would likely require twice as much instructional time.

The overwhelming evidence not only supports test-study, but also suggests that studies in support of study-test spelling are highly suspect. Yee's study of 2839 students in grades two through six supported test-study (1969). Research conducted among students in grades five through eight by Kingsley (1923), Gates (1931), Richmond (1956), and Christine and Hollingsworth (1966) all claimed strong support for testing prior to studying.

The test-study method in spelling identifies not only words that need special attention but also those that have been mastered. It provides more time to study the unknown words (Hillerich, 1977), establishes a "mental set toward words that is sufficient to produce gains over time" (Yee, 1969, p. 90), is more economical by producing equivalent results to study-test techniques in half the time (Christine and Hollingsworth, 1966), and fosters better attitudes

towards spelling (Petty, 1964, p. 840).

To summarize the research, it can be concluded that more than twice as many studies favor the test-study method (Blanchard, 1944). In spite of the evidence, most of the available materials use the study-test method. E. Horn (1960), expressed the sentiments of many: "This lag between what is known and what is done in spelling instruction is discouraging" (p. 1345).

A Study in Support of Test-Study Methods

In addition to the effect that the test-study method has on achievement, one of its greatest assets is saving students' time by identifying the words already known and those needing special attention. As early as 1930, Thompson demonstrated that a large number of students study words that are already well known. Test results of 1800 students, grades two through eight, showed that from 84 to 94 percent of the students could spell at least one-fourth of the words before any study of the words took place (p. 71).

Recently a group of second grade teachers in a middle class school district in the greater Houston area expressed an interest in finding out how much of the weekly spelling achievement among their students could be attributed to the spelling program.

Background of the Study

The school district under study uses the Basic Goals

in Spelling program in all elementary schools (Kottmeyer and Claus, 1976). According to Boutin (1980) who evaluated the Level Two (second grade) program of BGIS, each of the weekly lessons has several features, including: (1) words structured around a speech sound; (2) activities dealing with dictionary skills and the study of meaning; (3) reading and writing sentences, supplying missing words, and context-clue exercises; and (4) a weekly testing procedure that includes a check-point test on Wednesday and a final test on Friday (pp. 31-34).

Generally, pretests are not administered on Monday. Most teachers follow the recommended program with two days of study, the check-point test on Wednesday, and the same test repeated on Friday. The Friday test scores were reported to be unusually high with the average score close to 90 percent. These high scores lead the writer to wonder how much of the Friday scores could be attributed to the effects of the basal program.

The Problem

Because Basic Goals in Spelling utilizes the study-test method and does not advocate pretesting, an important question, which became the focus of the study, arose: How many of the words known on Friday were already known on Monday, prior to instruction?

The Method

During an eight week period, 25 second grade teachers in six elementary schools agreed to administer the Wednesday "check-point" test on Monday of each week rather than on the day recommended in the manual. The check-point test was administered in an identical manner on Monday and on Friday. Each word in the weekly unit was pronounced orally by the teacher, used in a sentence, and pronounced again. Once completed the papers were collected and corrected by the teacher. Raw scores were converted to percentage scores, and the results were recorded for each student on Monday and Friday for the eight week period. Other than shifting the pretest to Monday, all other aspects of the weekly schedule were followed.

Results

The first step in the analysis of the data was to determine the difference in test performance between the pretest and post-test scores. Table 1 displays the mean percentage scores on the Monday and Friday tests for each of the eight weeks.

Table 1 Here

Of the 3,471 tests taken on Monday, the average score was 68.1 percent. The Friday average of 91 percent represented a mean gain of 22.9 percentage points per student each week. The average Monday score for four of

the eight weeks exceeded 70 percent, and on week 3 the score reached 85.1 percent. The Friday scores were consistently high with only two weekly scores falling below 90 percent. Based on the percentage scores it might appear that pretest levels were rather high, the increase of 22.9 percentage points between Monday and Friday would seem to be a reasonable gain, and the Friday average is outstanding.

Percentage scores are difficult to interpret and often misleading, particularly in this case where the number of words taught each week is rather small. Table 2 presents raw data including the average number of words known on the Monday and Friday test.

Table 2 About Here

According to Table 2 an average of 8.6 words per lesson was already known on Monday prior to any instruction, while an average of 11.5 words was known by the end of the week. This means that 75 minutes of classroom instruction per week, along with the time that may have been spent practicing at home, produced a mere 2.9 word increase between Monday and Friday. Of the 101 words in the eight units, students already knew an average of 69 words and learned only 23 words (3 per week) during the eight week period.

A second step in the study was to determine the number of students who may have already achieved mastery prior to

the Monday tests. For the purpose of this analysis, a score of 80 percent or higher on the Monday test was considered to be "mastery". Each of the 3,471 tests taken on Monday was reclassified into one of two groups: those who achieved 80 percent or more and those whose scores fell below 80 percent. Table 3 illustrates the number and percentage of the Monday tsts in each of the two categories.

Table 3 About Here

According to the data in Table 3, almost one-half (46.1 percent) of the 3,471 tests taken on Monday were at or above the 80 percent level. In other words, one-half of the students already knew at least 10 of the words in a 12word unit. It was concluded that almost one-half of the students in this study did not need the instruction they received and may have wasted 75 minutes of their time practicing words they already knew.

Discussion

The study described here focused on one group of second graders, one school district, and one basal spelling program. The data suggests that when the teachers only had the Friday test scores to evaluate, achievement was impressively high. It would have been easy to believe that the basal program and creative instruction accounted for an average final test score of 91 percent.

In reality, forty-six percent of the students in this study knew eight or more words out of ten before Monday's lesson ever started. Almost one-half of the students spent 75 minutes each week studying words they already knew, filling in context clue exercises that could have been done with eyes closed, looking up words in the dictionary whose meanings they had known, and generally wasting their time. It would be interesting to know how many students in other districts fit this category. It would also be interesting to know the number of students who are placed into word lists far too difficult and unreasonable for their level of functioning. Unfortunately this information will never be known as long as the study-test approach is used in spelling.

Some would argue that the time is still well spent since one of the major objectives of most spelling programs is to learn spelling rules associated with the words in a lesson. Those who use this rationale should be aware that an extensive review of the literature by Fitzsimmons and Loomer (1978) found little support for teaching rules to improve spelling. This writer supports these conclusions and suggest that, in the overwhelming number of cases, the spelling of a word must already be known before a rule can be applied.

Others believe that the time spent in completing the exercises is good practice, particularly those activities

dealing with word meaning. While no one denies the importance of meaning, there is little evidence that meaning provides clues to spelling except for some words in which context is important, such as homonyms. Most vocabulary words selected for basal spelling programs are words of highest frequency and have been used proficiently in children's speaking vocabulary for years. For those who are rather competent in oral language, a lot of the time completing word meaning activities may be a waste of time.

It would be interesting to find out how long it would have taken for the students in the study to learn their three words each week had they known on Monday which words needed practice. It is doubtful that 75 minutes in class and additional time at home would have been required. On the other hand, had the 75 minutes been spent only on misspelled words, the average score of 91 percent on Friday may have been even higher.

Some teachers have made one slight adjustment which converts their study-test program to the test-study method. They simply shifted the Wednesday check-point test to Monday. Many of those making such a change report that they feel more satisfied because they can show the growth of their students from week to week.

Conclusions

Support for the test-study method in teaching spelling dates back for many years. Yet, few commercial materials are available with the test-study approach. Is it possible that one reason such programs are not published is that teachers would not use them? It has been suggested by some that teachers might feel guilty putting students through 75 minutes of instruction if a Monday pretest revealed that all the words were known. Perhaps one way to feel less guilty is to assume that everyone needs instruction. The study-test programs are built on that very assumption. They certainly do help in removing the guilt, don't they?

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Table 1

Mean Percentage Scores on the

Monday and Friday Test

Week	Total Words	N	Monday Test $\bar{x}$ Percentage	Friday Test $\bar{x}$ Percentage	Mean Gain
1	12	448	55.7	85.1	+29.4
2	12	445	73.1	93.9	+20.8
3	11	427	85.1	97.1	+12.0
4	13	453	62.7	91.0	+28.3
5	10	405	69.2	90.5	+21.3
6	11	455	70.4	91.6	+21.2
7	11	420	55.5	88.2	+32.7
8	21	418	73.1	90.6	+17.5
TOTAL	101	3,471	$\bar{\bar{X}}$ 68.1	$\bar{\bar{X}}$ 91.0	+22.9

Table 2

Mean Number of Words Known Correctly

on the Monday and Friday Tests

Week	Words Tested	$\bar{X}$ Words Known		Mean Gain
		Monday	Friday	
1	12	6.7	10.2	+3.5
2	12	8.8	11.3	+2.5
3	11	9.4	10.7	+1.3
4	13	8.2	11.8	+3.6
5	10	7.0	9.1	+2.1
6	11	7.7	10.1	+2.4
7	11	6.1	9.7	+3.6
8	21	15.0	19.0	+4.0
Mean Words	12.6	8.6	11.5	+2.9

Table 3

Number and percentage of Monday Tests Classified as 80% or Above and Below 80%

Week	No. of Tests	80% or Above		Below 80%	
		Number	Percentage	Number	Percentage
1	448	132	29.5%	316	70.5%
2	445	237	53.2	208	46.8
3	427	344	80.6	83	19.4
4	453	142	31.3	311	68.7
5	405	211	52.1	194	47.9
6	455	221	48.6	234	51.4
7	420	112	26.7	308	73.3
8	418	202	48.2	216	51.7
TOTAL	3471	1601	46.1%	1870	53.9%